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# PROCAMED REPORT

**Promotion des systèmes camelins innovants et des  
filères locales pour une gestion durable des  
territoires sahéliens**

**Tunisia, 22 to 29/09/13**

**Dr Bernard FAYE, coordinator**

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## **ACKNOWLEDGEMENTS**

I thank the staff of IRA-Medenine for their kind hospitality and the good organization of the time spent in Tunisia which includes meetings, field visits and several exchanges with camel farmers, technicians in development agencies and camel scientists. A special mention to the Director of IRA which give us a warm welcome speech.

## **RESUME**

Cette mission s'inscrivait dans le cadre du projet PROCAMED et avait deux objectifs :

- (i) faire le point sur l'avancement des activités de recherche-développement du projet en Tunisie, le partenaire étant l'Institut des Régions Arides de Médenine,
- (ii) accompagner une délégation saoudienne du projet FAO (camel project) de Kharj où je travaille comme consultant. Cette délégation comprenait 7 personnes (techniciens, vétérinaires, assistants) incluant le directeur du Centre.

En ce qui concerne le projet PROCAMED, plusieurs réalisations ont été visitées : éleveurs camelins laitiers ayant démarré une activité de production et de commercialisation du lait de chamelle dans plusieurs régions de la Tunisie (il s'agit d'une activité nouvelle), artisans utilisant les produits camelins (cuir, laine) pour une valorisation sur la base des innovations techniques formulées par le projet dans le domaine de la maroquinerie et du tissage, stations de recherche où sont réalisés les travaux notamment sur l'adaptation de la chamelle à la traite mécanique. Cela a permis également à la délégation saoudienne de se familiariser avec la démarche de transfert des produits de la recherche au développement (visite de l'office National du Cuir et de la chaussure, visite de l'Office de l'élevage et des pâturages, tous deux partenaires de PROCAMED).

## INTRODUCTION

This mission was achieved at the “*Institut des Régions Arides*” (IRA) at Medenine in Tunisia in the frame of the project supported by European Union called PROCAMED (“PROmotion of innovations in the CAMEl farming systems in MEDiterranean basin”). The main objective of the mission was to discuss about the advancement of the different research and development activities by the Tunisian partner. In the same time, the IRA-Medenine received a Saudi delegation composed of 7 members of the Kharj Camel Project managed by FAO in Saudi Arabia. The delegation included the National Project Director (NPD)

The general objective of the mission in Tunisia was to evaluate the achievement of research for camel development within PROCAMED project in Tunisia. The specific objectives were:

- To take knowledge of the research activities and of their advancement at IRA-Medenine within the PROCAMED project
- To visit the places where the technical innovations in camel farming system and in camel sector occurred
- To have an idea of the environmental context of the camel farming in Tunisia

The idea being to visit the achievements of PROCAMED project, there was two possibilities: visiting the Tunisian partner or the Egyptian partner (Desert Research Center at Mathrouh) which is also included in the PROCAMED project. However, due to the political situation in Egypt, this possibility was postponed until more favourable time.

## PROGRAMME OF THE MISSION

### *First day: IRA Medenine*

The first day of the tour was focused on the research activities of IRA and especially on the activities within PROCAMED project. A powerpoint was presented by Dr Hammadi and Dr Khorchani to give the main points of the project and the preliminary results. The main idea of the project "Promotion des systèmes camelins innovants et des filières locales pour une gestion durable des territoires sahariens (PROCAMED)" is to promote innovative systems in camel breeding for sustainable development of local industries and the management of the Saharan territory which represents the "hinterland" partner countries Tunisia and Egypt. The implementation of the project is based on conducting several studies for the diagnosis and awareness of the actual field situation. These include technical studies, socioeconomic studies, survey courses, household surveys, geographic information systems, determining demographic models, mobilization of new technologies for innovation, contribution to the promotion and dissemination of research results in field. PROCAMED project is focused on 4 points, namely:

- Improving productivity of camels

Includes the introduction of innovation in camel breeding systems: Improvement of numerical productivity through the introduction of biotechnology reproduction, the genetic characterization of camel populations, the evaluation of food resources for intensive dairy farming, improving the health status of herds, adaptation of camel to the intensive milk production system, introduction of new dairy products, evaluation of hides, skin and hair quality.

- Appropriation of innovations

Technical innovations should lead to an appropriation of innovations in camel breeding sectors by implementing activities such as: the analysis of the role of the camel in the household economy, analysis and support of existing channels, promoting fattening of camels, promoting innovative sectors (milk, leather, fur, bio-actives molecules).

- Sustainable land management

These innovations should lead to breeding camels as a sustainable management of arid lands and will rely on integrative activities such as: evaluation of the livestock population camel, economic viability of innovative products, evaluating the environmental impact of the camel breeding in arid socio-ecological systems, evaluation of the nutritional quality of the pastures by non-invasive methods, (mapping of resources - implementation of Geography Information System (GIS).

- Communication and dissemination

An important part of the project will be dedicated to communication and dissemination and will include: participatory researches, communicating of results of studies and surveys, dissemination of project results, innovations and technological developments to professionals, to decision-makers and technical services as well as to consumers, to partners and to European Union countries, to the scientific community and institutions.

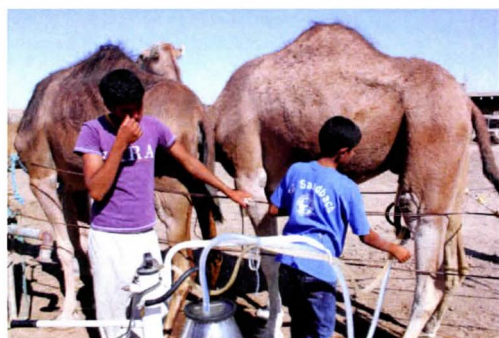


**Meeting with IRA staff and Saudi delegation:  
presentation of PROCAMED project**

After the presentation, a wide discussion was organized. In the afternoon, a meeting was organized with the head of range department, then the implementations of IRA were visited: laboratories, “enterprises’ incubator” (a structure for transferring the results of the research like camel milk products, handicrafts using camel leather and camel wool, cosmetics,...), Eco museum, camel reproduction center and camel farm.

### ***Second day: Chenchou and Gabès***

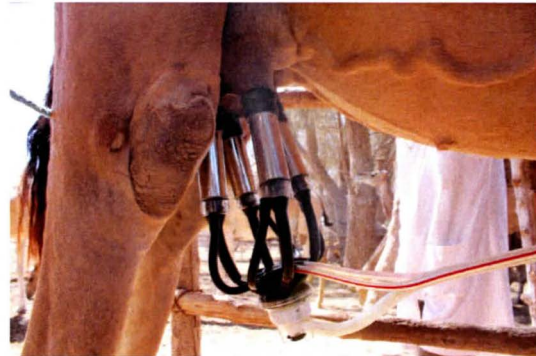
The second day of the tour was focused on field visit. Firstly, was a visit of a camel farm at Gabès where the owner had implemented with his sons a camel dairy farms (40 camels) with machine milking, feeding with concentrates and milk sold in small shops of Gabès city. The milking machine was introduced by PROCAMED project. In spite of their small size of the camel and of the low nutritive value of the diet (2 kg of concentrates per animal only), the dairy yield appeared quite honourable (7 liters/day on average). A debate for exchanges with the camel owner was organized in the farm and a degustation of camel milk was proposed.



**Camel dairy farm at Gabès: the farmer received  
milking machine within PROCAMED project**



After this visit, we went to Chenchou station, annex of IRA, where approximately 40 camels are reared for milk production. The station included also sheep and goats. The animals are all used both for production and research. The team of IRA has published notably many scientific and technical papers on the use of milking machine in camel.



Chenchou station where the experiments on milking machine are performed

### *Third day: Douz*

A camel farmer with more than 100 camels was implemented at 9km from Douz city and started milk production using milking machine furnished by PROCAMED project and having a contract with the company *Baraka* for selling camel milk in the main towns of Southern Tunisia. The animals were in relatively bad conditions (low body condition score) with a low individual production (2-3 litres/animal), but the hygienic conditions in spite that the milking was achieved in full desert, were correct. A milk degustation was organized after the milking. Discussions about the health conditions (ticks, ringworm) were done with the delegation.



Camel dairy farm at Douz. The owner received also milking machine from PROCAMED project

In the Douz city, handicraft worker using camel wool for weaving tissue of traditional *burnous* was visited. This worker used innovative technology proposed by PROCAMED project (separation between types of wool) helping him to propose high added value product.





*Burnous* made with high quality camel wool obtained with technique provided by PROCAMED

Then a short visit of the camel herds for tourism (safari in the desert) was done close to Douz before coming back to Medenine.

#### ***Fourth day: Tataouine***

Another camel farm was visited in the region of Tataouine. It was a dairy farmer starting milk production since few times. He had 50 camels and 12 were lactating at our visit. He has a milking machine given by the PROCAMED project and sold the raw milk in Tataouine city, in small shops. The herd is composed in two parts. The pregnant non-lactating camels were under the responsibility of a shepherd in pastoral areas, and only the productive part of the herd (lactating camels) was settled, receiving a diet including hay, straw and concentrates. The body condition score was medium and quite better than in Douz camel farm. The production (at the end of lactation at the time of the study tour) did not overpass 50 liters (4 l/camel). A degustation of the milk was proposed after milking. A spray for regular tick treatment was distributed to the farmer and a special training was organized by the PROCAMED project.



Camel dairy farm at Tataouine having got support from PROCAMED project for milking machine and spray for parasite treatment

After this visit, we returned back to Medenine via Cheribi and a final meeting was done for last exchanges before going to Tunis in the night. The final meeting with the vice-director of IRA was focused:

- On the necessity to have more exchanges regarding the results of PROCAMED project in order to help the coordinator to have more data for preparing activities report
- On the possibility of exchanges between Kharj FAO camel project and PROCAMED project, notably by sending Saudi staff for training in Tunisia

#### ***Fifth day: Tunis***

The first visit in Tunis was quite interesting and devoted to the CNCC (*Centre National du Cuir et des Chaussures* -National centre for leather and shoes). This centre is an “establishment of economic interest” under the authority of the Ministry of Industry. This centre has a sub-contract with IRA-Medenine in the frame of PROCAMED project and contributes strongly to the studies and development activities regarding the valorisation of the camel leather in Tunisia (training on skin collecting, technical innovation for skin processing, design for new final products, quality management). Tunisia is presently importing skin from Saudi camels. In terms of transfer of technical innovation to the camel sector, this partnership within PROCAMED project is quite essential. We visited the exhibition room and the workshop for skin preparation.





Visit of the « *Centre national du cuir et de la chaussure* » at Tunis: meeting, visit of the exhibition room and of the workshop. Innovative products with camel leather are exposed.



The second visit of the day was at the OEP (*Office de l'élevage et des pâturages* - Office of breeding and Range). After welcome speech from the general director, a presentation of the camel programme was done by the head of the camel development department. A strategic plan for camel development is presently submitted to the Tunisian government. The OEP is the main development agency in partnership with IRA Medenine within PROCAMED project. They contribute to surveys and to the transfer to camel producers.

In the afternoon, the group has visited the Sidi Thabet veterinary school. Existing since 1974, the vet school has 23 professors and is organized in 3 departments (fundamental sciences, animal production and clinical sciences). As the whole, 424 students (mainly females) are trained. The study length is over 6 years and included one year preparation and 2 cycles of 2 and 3 years respectively (basic and clinical sciences). Seventeen specialities are available. Ten thousand animals are examines each year. On the camel, some researches are achieved in different fields (PhD, vet thesis, books and papers): haematology, endocrinology, biochemistry, anatomy, reproduction, epidemiology of parasitosis. But low valorisation is expected and there are a limited number of studies compared to other species. A presentation of the Kharj camel project was done by the CTA and a presentation of PROCAMED project also.



Meeting with OEP and Vet school at Sidi Thabet, all partners of PROCAMED project

A project of implementation of an international course on camel disease and production was discussed with Pr. Jemli in collaboration with FAO.

### ***Sixth day: Tunis and departure***

An informal meeting was organized with Dr M. Bengoumi from FAO regional office to give some information on the study tour and regarding the organization of the FAO workshop at Nouakchott in Mauritania (6-12/10/13) on the camel development in North Africa.

### **SUMMARY OF VISITS**

The visits included 4 main subjects:

- research activities achieved by IRA presented through powerpoint and visit of the camel farm used for research (Medenine and Chenchou)
- The camel farms included in the different research-development projects of IRA and where equipment like milking machine, spray for antiparasite treatment was distributed and people trained for use them properly,
- The development activities for valorisation of camel products: visit of handicraft workshops, enterprises using camel leather (shoes, luggage), camel wool and processing camel milk products.
- The institutions having direct or indirect relationships with the partners of PROCAMED project (OEP, Vet School of Sidi Thabet, regional FAO office).

PROCAMED plays an important role for supporting the innovation in the camel farms (training and distribution of milking machine and equipment for health control) and in camel sector (sorting quality of wool, preparation of skin, new dairy products). For achievement of these goals, the PROCAMED partners in Tunisia (OEP, CNCC) are strongly involved to the transfer activities of the research results.

Elsewhere, a PhD in livestock economy was proposed in order to achieve the research on added value chain and to finish the survey on the place of camel in the smallholder's economy.

## **CONCLUSIONS**

The activities of the PROCAMED project in Tunisia were advanced according to the workplan and fruitful contacts occurred with the development agencies. However, the coordinator asked more data on the achievement of those activities especially for implementing the regular activities report.

# APPENDICES

## TIMETABLES AND ITINERARIES

### ***Sunday 22 September:***

- Departure from Riyadh at 4:40
- Arrival at Tunis at 1:30
- Departure for Djerba at 18:45
- Arrival at Djerba at 19:30

### ***Monday 23 September:***

- Departure for Medenine at 7:30
  - Welcome meeting with the director of IRA at Medenine
  - Presentations of PROCAMED project and FAO camel project at Kharj
  - Meeting with the head of range department
  - Visit of the eco-museum at IRA
  - Visit of the “enterprises’ incubator”
  - Visit of the camel farm of IRA

### ***Tuesday 24 September***

- Departure from IRA at 7:00
  - Visit of a camel dairy farm at Gabes
  - Visit of the IRA station at Chenchou
  - Visit of the hammam at Al-Hamma
- Departure for Douz
- Arrival at Douz at 20:00

### ***Wednesday 25 September***

- Departure at 7:00
  - Visit a camel dairy farm at Kebili
  - Visit of the camel tourism center at Douz
  - Back to Medine by Matmata (visit of Matmata troglodytes)
- Arrival at IRA-Medenine at 18:00

### ***Thursday 26 September***

- Departure from IRA at 8:00
  - Visit of a camel dairy farm at Tataouine
  - Visit of Cheribi town (old berebere city)
- Back to IRA Medenine at 15:00
  - Final meeting for synthesis at IRA
- Departure to Djerba airport
- Arrival at Tunis at 21:30

### ***Friday 27 September***

- Visit of CNCC (meeting, exhibition room and workshop)
- Visit of OEP (meeting)



- Visit of the “Ecole Nationale de Médecine Vétérinaire” à Sidi Thabet

***Saturday 28 September***

- Visit of Sidi Bou Said city
- Meeting with FAO regional officer (Dr Bengoumi)
- Departure from Tunis at 14:45

***Sunday 29 September***

- Arrival at Riyadh at 1:30

## VISITED PLACES IN TUNISIA

